

AMENDMENTS TO THE SPECIFICATION

Please replace the present title with the following rewritten title:

**ROTATING ANGLE DETECTOR AND APPARATUS THEREOF FOR DETECTING
THE ROTATING POSITION OF A ROTOR**

Please replace the paragraph bridging pages 1 and 2, with the following rewritten paragraph:

Referring to the detecting method of the magnetic sensor, description will be given to an example in which a hall unit is used. Fig. 5 is an explanatory view showing the detection principle of the magnetic one. The hall sensor is formed by a compound semiconductor such as GaAs, InSb or InAs, and output terminals 5a and 5b and input current terminals 6a and 6b are attached to a magnetic sensing section having a thickness d. An input current I_C is caused to flow to the input current terminals 6a and 6b so that a potential difference V_H between the output terminals 5a and 5b is changed corresponding to a variation of magnetic flux B in magnetic sensors. In the structure shown in Fig. 4, four magnetic sensors are provided. Therefore, a wiring shown in Fig. 6 is obtained. Fig. 6 is a typical diagram showing the wiring in the structure of Fig. 4. In Fig. 6, $\underline{51}$ denotes a magnetic sensor terminal, $\underline{61}$ denotes an input current terminal and 10 denotes a rotation detector. Four wirings are required for each magnetic sensor and 16 signal lines in total are connected. A rotating angle can be detected by calculating a signal sent from the magnetic sensor by means of an angle calculator which is not shown. Referring to a calculating method, a rotating angle θ can be calculated as $\theta = \arctan (V_a/V_b)$, wherein a differential voltage output of two outputs having a diagonal relationship in the four

magnetic sensor outputs is represented by V_a and a differential voltage output of other magnetic sensors is represented by V_b , for example.

Please replace the third paragraph, page 5, with the following rewritten paragraph:

Fig. 3 is a wiring diagram showing a magnetic sensor according to a third embodiment of the invention. In Fig. 3, 61 to 66 denote an input current terminal of a magnetic sensor of each rotating angle detector 10, 601 to ~~606~~ 604 denote an input current path for connecting the input current terminals, and 10a, 10b and 10c denote a rotating angle detector.